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ABSTRACT

Described is an adaptive comprehensive physical education (PE) program (funded by Title III in 1968) for 48 severly physically handicapped senior high school students in Rochester, New York. Program aims are given to be providing a diversified program of developmental activities in a friendly environment to increase the physical, social, and economic potential of students. Explained are 10 objectives such as provision for PE activities in at least three classes per week regardless of disability. Listed are teaching procedures such as budgeting class time for a short preparatory session and a long activity period to prevent regressive performance leading to frustration. Administrative considerations such as parental approval are listed as are desired student outcomes such as a greater sense of belonging. The program is said to have been initiated in 1964 with 20 students on a limited basis and to have been expanded after city school district support and federal funding to include the following improvements: emphasis on the individual students' needs, a driver education course, art work, attendance 5 days instead of 3 days per week, remodeled locker/therapy rooms, and additional personnel. Listed are PE activities such as badminton and horseshoes, and recreational activities such as golf and camping skills. Noted is involvement in program planning of participants such as local agencies and PE consultants. Listed is equipment such as platform mates and walkerettes not normally found in PE programs. Reported among student gains are better ability to cope with handicaps, greater independence, a keen desire to improve skills, fun in many activities, pride in success, and interest in athletics (several boys volunteered as managers for the varsity team). (EC)

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JEFFERSON HIGH SCHOOL

1968-1973

"A Comprehensive
Physical Education Program
for the Severely
Physically
Handicapped"

------ A critique booklet

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EC061400

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A Comprehensive . . Physical Education Program for the Severely Physically Handicapped

There are at Jefferson High School in Rochester, N.Y., 48 pupils who are severely physically handicapped. This thesis will be devoted to the manner in which physical education may be adapted to meet more adequately the physical and mental needs of these children and hopefully to induce other school districts to incorporate similar programs.

"The handicapped child consciously, or otherwise, seeks help in minimizing or overcoming his disability as well as acquiring a general education. The school should strive earnestly and effectively to aid the pupil in accomplishing these goals. In doing so it must be recognized, for instance, that the general program of physical education is designed for pupils who have no restrictions placed on their activity. Taking cognizance of this fact, two courses of action commonly have been pursued with handicapped pupils. The first has been to excuse the child, and the second has been to place him in a 'corrective program.' Neither course of action has been found adequate in terms of the child's total needs or the potentialities of the school for meeting these needs." [1]

[1] Arthur S. Daniels, "Physical Education and Exceptional Children," *Adapted Physical Education*, Harper and Brothers, New York, 1954, pp. 8-9.

Our desire at Jefferson was to provide an adequate physical education program adapted to the limitations of the youngsters. We were not concerned with providing a physiotherapy program, although secondary outcomes might include physical improvement, but rather an actual adapted physical education course of instruction which would be pleasant, enjoyable, and active within the limits of their handicaps.

The aim of the program was the same as that of regular physical education. "In adapted physical education, the effort is made to help the student take his place in the social and economic world as a citizen who is respected for his general qualities and capabilities. He is given an opportunity for the fullest development of his physical, social, and economic potentialities in an environment that is friendly and informal. In this developmental experience he is guided by understanding teachers. Under these conditions he learns how he can earn his place as a member of a social group, not trading on his disability, but utilizing his abilities.

"All pupils, regardless of the disability, should have an opportunity to participate in social recreation situations. It is believed that if a pupil can come to school, there is some mild form of activity in which he can safely engage." [2]

"The aim of an adapted program is to provide through competent leadership, a diversified program of developmental activities, games, sports, and rhythms suited to interests, capacities, and limitations of students with disabilities who may not safely or

[2] *Ibid.*, p. 81.

successfully engage in unrestricted participation in the vigorous activities of the general physical education program." [3]

Based on the foregoing the following objectives are listed:

1. *To provide a pleasant, enjoyable, and as physically active a program as possible within the limits of the students' handicaps.* There are many activities—some mild, some active—in which the student can engage. Fortunately the activities offered have carry-over value—once learned, the pupil can use them in later life.

   Evaluation—The curriculum provided an active program. A variety of activities was made available which included physical training using many different types of equipment for strength development, recreational games of all kinds, and several more active type activities. (See listing on page 20.

2. *To develop to the fullest, and this may be very limited, the physical capacity of the youngster by having him engage in adapted physical education.* "The newer trend in many schools is away from the correction of the physical defect by formal exercises and toward [illegible] vision of the advantages and opportu[illegible]lable through games and sports activities properly supervised and adapted to the needs of the typical student. This newer trend takes the physically handicapped individual as he is with respect for what he may become, helps him to help himself, and contributes to the better health and efficiency of the total individual." [4]

   Evaluation—The youngsters have demonstrated an improvement in range of motion and physical strength in a limited capacity. The hope for actual improvement in condition is somewhat guarded; however, retention of status quo rather than further loss is an objective well within reach and has been maintained.

3. *To promote good mental attitudes and an outlet for surplus energies.* "Play with its emotional uplift, is as necessary as work and leisure for the individual." [5] "The principles involved in recreational therapy for the mentally ill may well be used as a preventive for many of the so-called normal individuals whose drives and desires have not been adequately expressed." [6] The handicapped child has the need to belong, to achieve success in an endeavor as does the normal child. "The psychiatrist and the psychologist recognize sports and games as ideal outlets for the expression of the fundamental drives, desires, and urges, which are often thwarted and unexpressed. Play is a necessity for relief from the monotony and strain of work. The child's usual activity is not sufficient to absorb his available energy." [7]

   Evaluation—The mental attitude is something that is difficult to ascertain. However, a critical look at the youngsters from the beginning of the year to the present time will indicate a marked improvement in their outlooks on life and their surroundings. Their cheerful, pleasant attitudes belie the problems that beset these children daily.

4. *To provide a complete program so that no child would be exempt from physical education.* The program should be set up to include all types of activities. It should be adapted and made simple in execution so all ambulatory cases may participate. Social and quiet games, i.e., chess, cards, etc., should be included so heart cases will not be eliminated.

   Evaluation—At the present time all 48 children have been scheduled to take gym at least three times per week. Many are involved five times in the gym program. The activities guarantee something in which every child can participate regardless of disability. Ambulatory cases, heart problems, and even youngsters carrying catheters are engaging in some form of activity.

5. *To provide activities for fun.* The adapted physical education program should be instructional; however, many activities should be included which are played for enjoyment and for the social values derived.

   Evaluation—Skills are taught, attention is given to muscle tone, but the primary concern in the activities provided is the atmosphere of fun. The meeting of all objectives is handled with the philosophy that improvement of instruction is done with the fun vehicle.

6. *To create an atmosphere which will reveal to the student his strengths and not his weaknesses.* "A program of adapted physical education which will help the individual increase his strength, range of movement, improve coordi-

[3] *Ibid.*, p. 82.
[4] George T. Stafford, Ed.D., *Sports for the Handicapped*, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1947, pp. 6-7.
[5] *Ibid.*, pp. 12-13.
[6] *Ibid.*, pp. 36-37.
[7] *Ibid.*, p. 36.

nation and endurance, is rendering an invaluable service. If walking is improved, stair climbing becomes less of a problem, and the hundreds of daily acts are accomplished with less fatigue and with greater efficiency, and the handicapped person experiences a vastly improved total living situation. He becomes less dependent and feels more secure in his ability to meet his own needs. An individual program of carefully designed developmental exercises, rhythms, games, and sports can contribute a great deal toward improving total function." [8]

Evaluation—Attention is given exclusively to what the child can do. Emphasis is provided to activities that the youngster can do with success and what he cannot do is ignored. Areas in the school are utilized in allowing the child to be successful in mastering daily acts of stair climbing, independent motion and movement, and becoming more secure in his ability to meet his everyday needs.

7. *To provide activities as similar to those of the regular program within an adapted philosophy.* The items included in the orthopedic block were set up as much as feasible to complement those in the regular physical education block program. For example, when the pupils are engaging in soccer during the soccer season, the people in the orthopedic program will also be in soccer activities. A similar system is used in basketball, apparatus, weight training, track, etc. The activity may be of a recreational game type as well as group mass play.

   Evaluation—The provision is made whereby the student engages in programs similar to those of the regular students' activities. This enables the handicapped child to feel that he is a part of the school community, so less stigma is attached to his condition. He is made to feel as normal as possible.

8. *To provide an atmosphere for learning rules, philosophy, safety procedures, and health habits by encouraging physical growth to their optimal level.* The pupil will learn to play within the spirit of the rules of the game in which he is engaging. He must learn to handle his handicap safely while participating in various types of activities. Opportunities will arise which will enable the teacher to use the technique of incidental health teaching in regard to physical conditioning, ways to improve endurance, etc.

   Evaluation—Rules, philosophy of games, safety procedures, and health habits were uppermost in the minds of participants and teachers so discipline is maintained and growth in spirit is achieved. Many games are from foreign lands so some cultural training is gathered in an incidental way. Teachers find opportunity to provide health training habits as the games progress.

9. *To promote good student-teacher rapport.* "Rapport involves more than mere cooperation with the participants and requires that the teacher consistently look for ways in which he can make the handicapped person feel more at ease and comfortable. An out-going role must be played by the teacher because the handicapped person is not apt to take the lead in developing active participation in activities. This kind and persuasive manner should have no element of force in it. Patience is the byword of the teacher's technique. Time and time again the handicapped person may not respond. Persistent efforts should be made by the teacher in order to secure the proper reactions from specific individuals." [9]

   "The teacher should know all about the student—his disability, his attitude toward it, his attitudes toward life in general, his hopes and fears. Only under these conditions is the teacher in a real position to help. The willingness to help must be fortified by the knowledge of how to help. Due to varying needs and abilities of pupils, the teacher must be able to exercise flexibility in carrying out the established program." [10]

   Evaluation—Because of the close proximity of teacher and pupil, in some cases a one-to-one ratio, teacher-pupil rapport is excellent. The teachers actively engage in games with pupils. Flexibility, patience, and gentle persuasiveness are used as techniques to achieve the established desired outcomes of each individual class.

10. *To evaluate and grade the progress of pupils in order to keep the parents abreast of their status.*

    Evaluation—Constant communication is maintained with the home and Jefferson's central orthopedic office to keep parents currently informed of their child's progress. A reevalua-

[8] Daniels, *op. cit.*, p. 87.

[9] Frederick M. Chapman, "Leadership of Activities," *Recreational Activities for the Handicapped*, The Ronald Press Co., New York, 1960, p. 22.

[10] Daniels, *op. cit.*, pp. 93–94.

tion of program, equipment, and physical condition is always under scrutiny.

11. *To provide the beginning of a happy, satisfying and worthwhile life in the present and future for this group.* "An orthopedic program may be the only means available for the handicapped person to narrow the gap which exists between himself and others he wants so much to be like. Recreational sports and games are invaluable in providing opportunities for satisfying desires basic to all of us. The potentials for belonging, being wanted, and even getting a little recognition lie strongly within the recreational experience. A handicapped person who can become skilled in an activity valued by his group, develops a feeling of adequacy. He acquires a status within the group not previously attained." [1] These outcomes have carryover into the handicapped person's life which will better enable him to meet other obstacles.

Evaluation—A review of the people who have been graduated from the program and have taken their places in society will reveal a group of happy, independent, useful citizens who have learned to live with their handicaps and have made many worthwhile contributions to the community.

Procedures and Methods

The teacher, understandably, is an important factor in the success of the adapted physical education program. He must be able to translate medical findings into desirable activity experience. He must have at his command an excellent repertoire of the various recreational activities which can be called upon for use in a flexible situation. The teacher must have the desire to give all the time and effort necessary to help the youngsters move toward their goals, overcoming the many difficulties encountered. Even with the best background, personality, and willingness, the teacher must keep several special methods and procedures in mind as insurance for complete success. They are as follows:

1. Verbal directions should be few and simple but complete. It is undesirable to have too many complex rules and directions to follow. A more direct course would be to adapt the activity simply but within the spirit of the game so the outcome will be apparent to all participants.
2. Teacher participation is an excellent teaching device. This technique manifests itself particularly in the pool. Confidence can be instilled in the youngster if the teacher is with him—guiding, demonstrating, and being in a sense a part of the handicapped person himself.
3. Praise is extremely important in helping the handicapped child feel a sense of improvement. Encouragement in the effort put forth will go a long way in motivating the child. It must be kept in mind that perfection in skills is not a goal in the orthopedic program.
4. The time allotted should be budgeted so a minimum of time is spent in preparation for the activity. Practices should be short to enable the pupils to begin the activity as soon as they are ready. If too much time is spent on practicing, a regression in performance may occur leading to frustration.
5. New activities should be introduced frequently to keep interest and desire at a high level. It is imperative not to let an activity die on its own but rather stop it while interest is high so that the pupils will want to return to it at a later time. However, wise judgment must be considered here because the handicapped pupils will want to participate in those activities they have mastered and can engage in with reasonable success. Therefore, it would be advantageous to return to a skill perhaps with a varied or different approach for repetition and review. Take several roads to the same destination.
6. There is a definite margin for error and mistakes that will be made. Modification will have to be made and a policy of constant evaluation will have to be in effect. The teacher must have unlimited patience. If an activity does not work, the reasons must be analyzed and the activity modified or perhaps dropped completely and replaced with something else.
7. Each time the handicapped person comes to gym is a new day. One can never be sure what problems or frustrations have burdened the child since the last meeting. His levels and plateaus may be frequent and sudden. Therefore, the teacher must be continually restimulating and remotivating the student.
8. It is desirable to have all children participating in the activity. It must be expected that the youngsters engage in the activities. A child will not be babied but the prodding should be gentle with understanding and compassion for his difficulties.
9. There will be ample opportunity for incidental

[1] Daniels, *op. cit.*, pp. 86–87.

teaching in the area of health. Cleanliness, diet, rest and sleep, and care of defects and disease are among the topics that should be included.

10. "Instruction must be slow, deliberate and progressive. Small, sequential, and concrete steps should be followed in presenting material. 'Make haste slowly.'"[12]
11. "Guidance of these individuals in many facets of their lives becomes a major responsibility of the physical education instructor because tremendous rapport is built between child and teacher. Such activities will be both of a formal and informal nature."[13]
12. "Grading and evaluation should be an objective appraisal of the progress each individual has made in the attainment of class objectives. This should be supplemented by a narrative report to the parents of the child's status and progress."[14]

Administrative Considerations

In evolving an orthopedic program of this type several problems of an administrative nature must be taken into consideration and solved, at least to a temporary degree.

1. *Parental approval*. It is understood that parents of ambulatory children are deeply concerned about the types of programs in which their children are engaging. To insure that the program meets with the approval of the parents, a letter should be sent to all concerned before a child is entered.
2. *Class size*. The size of the class will be dependent upon the number of handicapped children in school. It is proposed that the pupil-teacher ratio would be 5:1. In the aquatic program there will be a 1:1 ratio. The use of student leaders will aid in meeting this requirement.
3. *Periods per week*. Ideally the class should meet five periods per week. The minimum allotment should be two periods per week.
4. *Length of periods*. The time length should be the same as those of the regular class. There should be some flexibility as the pupils must be wheeled to and from class.
5. *Student leadership*. The use of students is an important aid in the preparation of the children for activities. The regular students can be obtained from study halls so as not to miss any of their school work. They can help in bringing the children to class, dressing and undressing for swimming, removing braces, assisting in the organization of games, and acting as referees and umpires.

There are several outcomes that are desired. After a trial period the program should be evaluated in light of setbacks or real progress made with the students. Suffice it to say more are in the hopeful stage than perhaps will ever become realities. Several of these are as follows:

1. "The student will be better able to cope with his conditions.
2. Greater independence will be achieved by the handicapped individual.
3. The student's desire to get along better with others will be boosted.
4. The student's faculties can improve to enable greater scholastic improvement. This involves alternating periods of stress and relaxation.
5. The pupil will see his potential and will attempt to develop it."[15]
6. The student will be in experiences for improving physical growth up to his potential.
7. The child will be having some fun leading to a zest for life.
8. The child will experience success which will diminish the possibility of an inferiority complex.
9. The handicapped person will have a sense of belonging.
10. The child will develop a pride in his school.

Progression from Mass Class to an Individual Gym Program

It is the consensus of opinion that the orthopedic gym program is a highly successful operation. Mistakes are made as is expected in selection of activities and materials; however, most of the program is extremely well received by the participating youngsters. Parents are solid in their support; and administrators, faculty, students, and experts in the orthopedic field are most gracious in their support and advice.

Discussions held informally as well as in the form of written evaluations show an overwhelming degree of enthusiasm for continuation of the program. There is also a desire for expanding the time allotment to include a driver education course and some art work

[12] Julian U. Stein, "Adapted Physical Education for the Educable Mentally Handicapped" *J.O.H.P.E.R.*, December 1962, Vol. 33, No. 9, p. 51.
[13] *Ibid.*
[14] *Ibid.*

[15] John R. Schoon, "Some Psychological Factors in Motivating Handicapped Students in Adapted Physical Education," *The Physical Educator*, Vol. 19, No. 4, December 1962, pp. 138-140.

to supplement the regular physical education and recreational programs. The youngsters indicated they would like to come to the gym 5 days per week.

Careful analysis of the submitted reports indicates everyone concerned with participation, administration, teaching, or just observing the orthopedic class is sold on its value, as a physical conditioner, developer of health attitudes, and provider of fun for all the youngsters.

Interest in athletics is stimulated to a degree that several of the boys have volunteered to serve as managers for junior varsity and varsity teams—proof of their value and worth to their school.

The high ratings received by the program gave credence to the fact that somehow all handicapped children must be given the opportunity to become involved. With the authorizations provided by the Elementary and Secondary Education Act, a means became available for expanding the program by the incorporation of needed equipment and the hiring of additional personnel to insure that every child be scheduled every day of the week. A report was submitted, evaluated, and approved. Plans were formulated and put into operation with the following format:

The students (one or more) come to the class and are met by a teacher. The pupils then change into gym clothes in a private dressing (locker) room area and proceed to the physical therapy room. A regular program of physical training (based on recommendations of the school's orthopedic surgeon in consultation with pupil's personal doctor) is administered. This phase of the class continues for 10 minutes. The teacher next provides the core section of the class which might consist of such activities as participation in a recreational game or instruction in a carry-over sport such as archery, bowling, or swimming. The child then returns to the private orthopedic shower room for a refreshing shower, dresses, and returns to his academic classes.

The program was initiated in September 1968 and 48 youngsters with various degrees of disability, both boys and girls, participated. The following items were constantly kept in mind throughout the school year:

1. All children had an opportunity to participate.
2. An active and diversified program was available and utilized.
3. The children had fun in many of the activities.
4. Attention was given to developing physical fitness, learning rules of games and playing within the spirit of these rules, all of which help to promote good mental attitudes.
5. An atmosphere was provided in which the youngsters could discover and develop their strengths.
6. Devices included: simple directions; teacher participation; liberal use of praise and encouragement; progressive steps to insure learning of skills and techniques; and development of excellent teacher-student rapport.

Statement of Need

Education and Cultural Facilities and Resources

The City School District of Rochester includes 43 elementary schools, eight comprehensive high schools, and one technical and industrial high school. In addition, the school system is involved in such programs as a Manpower Development and Training Center and a series of preschool programs supported through the local Community Action Program funded under the Economic Opportunity Act. As a participating member of the Genesee Valley School Development Association, the Rochester city school system is part of a cooperative educational enterprise involving 40 school districts.

Rochester and surrounding towns are the homes of numerous institutions of higher education: University of Rochester, St. John Fisher College, Nazareth College, Roberts Wesleyan College, Colgate Rochester Divinity School, Rochester Institute of Technology, State University Colleges at Brockport and Genesee, and Monroe Community College.

Rochester is most fortunate in having an excellent library system, the Memorial Art Gallery, and the Museum of Arts and Sciences. It is also well known as the home of the Rochester Philharmonic Orchestra and the Eastman School of Music. In addition, the Community Players and the new Theatre East attest to the interest of the residents of Rochester in drama.

There are 101 social agencies in the Rochester area cooperatively joined under a Council of Social Agencies for Rochester and Monroe County.

Rochester has an international reputation as the home of many well-known industries which work cooperatively with the local Chamber of Commerce and also as participants in an Industrial Management Council.

In addition, the services of the Monroe County Health Bureau, Day Care Training Center for Handicapped Children in Monroe County, Inc., United Cerebral Palsy Association of Rochester Area, Inc., the Special Education Department and the Pupil Personnel Services Division of the City School District, as

well as the services of the Division of Health and Physical Education and Recreation of the New York State Education Division, will be available.

It will be a function of the planning group of this project to coordinate and articulate the many facilities available with the purposes and activities that are described in this application.

Determination of Needs and Priorities

Since one of the primary objectives of public education is to provide each child with educational experiences most appropriate to his needs, interests, and ability, it is essential that a suitable program be offered the child with severe physical handicaps. The City School District has been faced with the problem of providing continuous and appropriate educational opportunities for such children. It has found that the number of such children is limited in any one school. Moreover, it has been demonstrated that severely physically handicapped children may profit from regular classroom experiences, if they are fortunate enough to have an experienced, sympathetic, and understanding teacher who provides a comprehensive program and who has the time and energy to work closely with each child. Unfortunately, for many handicapped children such optimum conditions are not usually available.

A limited physical education program for handicapped children was started at Jefferson High School in 1964 when there were only 20 such pupils enrolled in this school. This program was made possible through the voluntary efforts of the physical education staff. No specialized equipment was available and no staff was assigned to the program. Despite these limitations, the activities attracted the attention of City School District staff as well as staff from Monroe County Public and Parochial Schools.

The operation of physical education classes for the handicapped within the City School District has aroused the interest of some suburban parents to place their children into these classes. As a direct result, the number of pupils seeking this program has doubled.

The City School District, recognizing the need for providing special facilities for physically handicapped pupils, has remodeled a large locker room to provide two additional rooms to serve handicapped pupils in the physical education program.

To provide a comprehensive program for this number of pupils, as well as to prepare for an anticipated increase in the number of such pupils, demands the services of full-time staff. This project has grown out of recognition of this need. Further, equipment is required to provide a more comprehensive program.

This project was one of approximately 20 submitted to the Superintendent of Schools for consideration. A review committee of teachers and administrators recommended that it be submitted as one of six projects from the City School District of Rochester. At a later meeting between City School District staff and the coordinator of title III ESEA in the New York State Education Department it was decided that this exemplary project be submitted as one of two projects from the City School District of Rochester.

Rationale for Planning Grant as Best Solution to Meet Needs

Since this project is exemplary, this grant is designed to provide a most comprehensive program for the severely handicapped. The cooperation of the local, State, and national agencies has been promised in order to accomplish this project.

A special grant appears to be the most rapid method for the accomplishment of this exemplary project.

Program Emphasis

The severely handicapped student must be given every opportunity to achieve equal rights in the availability of educational opportunities. Experience to date has shown that conflicts in school scheduling, lack of teaching staff, and transportation difficulties have made it extremely difficult to schedule all handicapped students to attend classes in health, physical education, and driver education. This means some handicapped children do not have an opportunity to exercise their usable muscles but are confined to their wheelchairs, braces, or crutches for the entire school day.

This proposal calls for the assignment of three physical education specialists to facilitate the establishment of an exemplary physical education program. This program will be scheduled to insure that every handicapped student has one period of activity daily.

The personnel will supervise physical education and swimming activities and therapy as prescribed by the student's doctor or the school orthopedic specialist. Personnel will also supervise the use of therapy equipment and showers and assist in dressing the handicapped.

The program will include:

Physical Education Activities

1. Swimming
2. Weight training and a regular exercise program that would encompass both isometric and isotonic activities
3. Walking and hiking–both outside or inside on a treadmill
4. Archery
5. Badminton
6. Horseshoes
7. Apparatus–Exer-Genie, rowing machines, bicycle machine, etc.
8. Basketball and other ball skills that can be taught individually
9. Table tennis
10. Tennis
11. Rhythmics
12. Track and field events–all the events that can be practiced for the National Wheelchair Games and the Paraolympics (wheelchair dashes, shot put, javelin, discus, wheelchair slalom, etc.)

Recreational Activities

1. Archery
2. Bowling
3. Table tennis
4. Golf
5. Riflery
6. Dart throwing
7. Horseshoes
8. Shuffleboard
9. Fly casting
10. Pool and billiards
11. Quiet games (chess, checkers, etc.)
12. Arts and crafts
13. Music appreciation and musical games (rhythms)
14. Camping skills and activities
15. Croquet

Driver Education

Driver education will inspire confidence and independence in the physically handicapped youngster and will permit him to take his rightful place in society.

This program will be available to the physically handicapped. When scheduled for driver education, the student will be assigned to two periods per week behind-the-wheel and two periods of theory.

Planning of Program

Planning Participants

1. Education and Local Agency Participation

The chief consultant in health and physical education for the city school district, the director of special education for the city school district, the physical education staff at Jefferson High School, the helping teacher for the physically handicapped at Jefferson High School, the principals of the schools, and Dr. William Howe, the school orthopedic physician, met several times to plan this exemplary program. The supervisor of physical therapists and the school medical director of the Monroe County Health Bureau were also involved. Letters of involvement are incorporated in the assurances as evidence of interest.

2. Participation of Teachers

This project provides for the involvement of teachers and staffs from the cooperating agencies in workshops, evaluation procedures, and critiques.

Description of Planning, Methods, and Procedures

Jefferson High School is the receiving school for the severely physically handicapped. The department head of health and physical education and the project director recognized the need for a good program of physical education and recreation. The director and the assistant director of health and physical education for New York were consulted as well as the consultant for title III projects in the New York State Education Department.

Review of the literature indicates that few programs of this kind exist throughout the country. No program of this kind exists in the public schools of New York State.

The acting vice principal of Jefferson High School, the department head of health and physical education at Jefferson High School, and the chief consultant for health and physical education, City School District of Rochester, met with county and city health officials to discuss and plan the proposed project.

Facilities, Equipment, and Materials Being Used

Facilities

Jefferson High School facilities

two gymnasiums–60' x 90' each
swimming pool–35' x 75'
two new rooms
two tennis courts (outdoors)
two blacktop basketball courts (outdoors)

Equipment and Materials Purchased and Now Being Used

Equipment needed for this project tends to be unique in nature. It is not the type of equipment normally found in or available through the regular physical education program. The following specialized equipment is essential to provide physical education and recreation for severely physically handicapped children:

Platform mates 6" x 8" x 18"	2
Parallel bars (walker adjustable)	2
Walkerettes–folding	4
Lumex aluminum adjustable canes	6
Handy Standy splint sets	2
Stationary bicycles	2
Stretchaways	35
Losstrand crutches (adjustable aluminum)	6
Adjustable canes	6
Standard wooden crutches	6
Book carriers for wheelchairs	35
Archery mats	4
Easels to hold archery mats	4
Archery target faces 48"	24
Archery gloves	12
Aluminum ground quivers	6
Archery arm guards	12
Target arrows 24"	1 gross
Target arrows 26"	½ gross
Archery bows 20 lb.	12
25 lb.	6
30 lb.	2
Archery backstop net (10' 6" x 20')	1
Dart boards	2
Rocket darts (suction cup)	2 sets
Combination dart sets (baseball and dart game)	2 sets
Indoor rubber horseshoes	2 sets
Deck tennis rings	4
Rubber quoit sets	2
Safe-T-Way bowling (plastic)	2 sets
Candlepin bowling	1 set
Mats (folding type) 4' x 5'	10
Rubber chest exercisers	12
Folding table tennis table	1
Table tennis paddles	8
Table tennis net	1
Table tennis brackets for net	1 pair
Table tennis balls	1 dozen
Croquet sets	1
Game room shuffleboard sets	2
Billiard table	1
Isometric–Isotonic Trainer (multiple purpose and use) four stations	1
Art and handicraft materials	
Chess, checkers, Monopoly games	
Roll-out tetherball set	1
Weight training equipment	
Record player	
Records	
Movie camera 8mm and projector	
8mm film	10 rolls
Swimming safety belts	
Oyer lift	
Rowing machine	
Chest pulley weights	
Portable ramp for swimming pool	
Equipment to be recommended by M.D.	

Conclusion

It was felt that, in retrospect, the following outcomes have been achieved:

1. Students were better able to cope with their handicaps.
2. Students achieved greater independence.
3. Students indicated a keen desire to improve their skills and physical development.
4. Students had fun in many activities.
5. Students developed a pride in succeeding in athletics.
6. Students had a sense of belonging.
7. Students developed more strength.
8. Students developed an interest in athletics; several boys volunteered to serve as managers for the varsity teams.

ADAPTED PHYSICAL EDUCATION PROGRAM FOR ORTHOPEDIC STUDENTS

Jefferson High School
1968-69

	Physical Education		Swimming	
	Registration	Sept. 4	Registration	
	Orientation	9	Orientation	
			SKILLS	GAMES AND STUNTS
Sept. 16-30 BLOCK I	Archery, dart throwing, mild hiking " " " " "	Sept. 16	Breathing holding	Count fingers underwater
		Sept. 23	Prone float	Floating for time
		30	Back float	Jellyfish, prone & back
Oct. 7-21 BLOCK II	Adapted soccer, horseshoes, walking Goal ball, horseshoes, walking Line soccer, horseshoes, walking Wheelchair soccer, horseshoes, walking	Oct. 7	Push off, kick, glide	Front glide for distance
		14	Change direction	Chain swimming
		21	Turning over	Front somersault
Oct. 28-Nov. 18 BLOCK III	Basketball activities, quiet social games Skills, passing, shooting movement, checkers, chess Free throws, card games Adapted wheelchair basketball, guessing games	28	Porpoising	Porpoising race
		Nov. 4	Treading water	Treading water for time
		11	Sculling	Sculling, head first, feet first
		18	Fin and winging	Water volleyball
Nov. 25-Dec. 9 BLOCK IV	Volleyball, badminton, table tennis " " " " " " " " " " " "	25	Gradually more into deep end	Log rolling
		Dec. 2	Harness (floating, threading, swimming)	Bobbing, number and distance
		9	Human stroke	Water tag
Dec. 16-Jan. 13. BLOCK V	Weight training, rhythmics Weight-isometric exercises; rhythmics-square dancing dumbells Weight-pulleys; rhythmics—social dancing	16	Side stroke	Come over tag
		Jan. 6	Crawl stroke	Keep away
		13	Breast stroke	Follow the leader
Jan. 20-Feb. 3 BLOCK VI	WEIGHT TRAINING Bar bells, Rotators Rowing—isotonic exercises RHYTHMICS Music appreciation Music games	20	Elem. back stroke	Safety tag
		Jan. 27	BEGINNERS	
		Feb. 3	Face float	
Feb. 10-24 BLOCK VII	Apparatus—tumbling, visual aides Apparatus, balance beam, tumbling, movies Apparatus, low parallel bars, tumbling, arts and crafts	10	Back float	
		17	Bobbing	
		24	Swim—turn to back float	
Mar. 2-16 BLOCK VIII	Apparatus, horse, tumbling, arts and crafts Apparatus, low horizontal bars, tumbling, art appreciation, Apparatus, low horizontal bars, tumbling, painting, etc.	Mar. 2	Back float—turn and swim	
		9	Fin or wing	
		16	A.R.C. Deep Water Test	
Mar. 23-Apr. 13 BLOCK IX	Apparatus, tumbling, art appreciation, painting, etc. " " " " " " " " " " " "	Apr. 6	INTERMEDIATES	
		13	Back Float—deep water	
		20	Elem. back stroke	
Apr. 27-May 11 BLOCK X	Group games, shuffleboard, clock golf Putting, tag games, modified bowling Circle games, chasing-fleeing, and ball activities	27	Dive—swim underwater	
			Tread water	
			5-minute swim	

It is believed that all benefited from the first year of operation.

Dissemination

A broad public relations program informs the public of this program. News releases via newspapers, radio, and television help to publicize the activities.